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Factors Contributing to Popularity of Loyalty Programs: Evidence From Emerging Markets

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Abstract

Using secondary data from multiple sources, this study empirically examines the factors that contribute to the popularity of loyalty programs in the airline and hotel industries in the context of emerging market economies. We find that the number of partners, the number of redemption options, and the threshold for obtaining elite status all positively contribute to a loyalty program's popularity. However, the award redemption requirement has the opposite effects on a program's popularity. Our results show that the redemption requirement of top-tier preferential treatment negatively affects the program's popularity. Surprisingly, the redemption requirement of entry-tier preferential treatment positively affects the program's popularity. As one of the few program-level empirical studies, this study contributes new insights to the extant literature on loyalty program management and provides managerial guidelines for practitioners in the hospitality sector.

Keywords

loyalty programs; hospitality industry; emerging markets; empirical study

Loyalty programs, as structured marketing efforts that aim to enhance customers' loyalty by rewarding their repeat purchase behaviors (Gandomi & Zolfaghari, 2013), have become a prevalent practice in the hospitality industry. From different perspectives, the extant literature on loyalty program management has extensively examined the factors that could affect a loyalty program's efficacy such as increased purchase frequency, decreased customer price sensitivity, and customer advocacy or increased wallet share (McCall & Voorhees, 2010). In this study, we examine the factors that contribute to a loyalty program's popularity from a customer's perspective. We believe that a loyalty program's popularity is crucial for its success because, in the long term, positive customer perceptions will reflect a program's commercial success (McCall & Voorhees, 2010).

In terms of research questions and methods, most existing studies on loyalty program management mainly examine how individual factors influence consumer behavior based on the survey data collected from each consumer. The consumer is the unit of analysis in these studies. In addition, their results are derived from the data collected from developed market economies. In this study, we attempt to contribute to the extant literature by conducting a program-level empirical analysis that investigates how different factors can jointly influence a loyalty program's popularity. Because of their important market shares (Kumar & Shah, 2004), we choose frequent flyer and frequent guest programs used in the airline and hotel industries, respectively. Frequent flyer programs typically offer award flights, upgrades, and lounge access to incentivize customers to fly with a particular airline or airline alliance. In the hotel industry, frequent guest programs offer award rooms, upgrades, free breakfast, and Internet access as incentives to attract loyal guests. In this study, we are focusing on emerging market economies as our research context because of their practical and theoretical relevance and lack of research in the literature.

From a practical perspective, loyalty program membership in developed economies has reached a stage of maturity (Capizzi & Ferguson, 2005). By contrast, loyalty program membership is still rapidly increasing in emerging market economies. In addition, compared with those in developed economies, customers in emerging market economies seem to be more attracted by incentives, such as loyalty cards and frequent guest programs (http://dazeinfo.com/2013/11/25/loyalty-programs-favored-92-consumers-developing-countries-asia-study/). The rapidly growing market share and the additional benefit of incentivizing customers make loyalty programs in emerging markets a new

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context that is attracting considerable attention and gaining managerial relevance. From a theoretical perspective, numerous existing studies in the marketing literature have shown that consumers in emerging market economies may present different purchasing behaviors from those of consumers in developed economies (Atsmon, Kuentz, & Seong, 2012), and some well-established marketing approaches in the developed economies, such as loyalty programs, may not function in the same way as they do in emerging markets (Zhang, van Doorn, & Leeflang, 2014). Therefore, loyalty programs in emerging markets provide a unique and interesting research context that provides us with the opportunity to contribute new findings.

As no secondary data set is available, we manually collected publicly accessible program-level information from multiple sources and consolidated them into one data set. With respect to a program's popularity from the perspective of customers, we collected information regarding winners of the Freddie Award, which is regarded as the "oldest and most prominent" worldwide recognition of frequent flyer and frequent guest reward programs over the past 5 years (https://en.wikipedia.org/wiki/Freddie_Awards). In addition, we performed a broad search for information regarding the details of the loyalty programs that the "major players" in the airline and hotel industries offer in emerging market economies. These major players are defined as those with more than 10% market share in the country in which their headquarters are located.

Our results show that a loyalty program's popularity increases with the number of partners, with the number of redemption options, and with the difficulty of obtaining both entry and top elite status tiers. Surprisingly, our results show that the award redemption requirement creates significantly opposite effects, depending on the type of preferential treatment that a consumer aims to redeem. For the entry-tier preferential treatment (economy class tickets, standard rooms, etc.), increasing the redemption requirement increases the program's popularity. By contrast, for top-tier preferential treatment (business or first class tickets, suite rooms, etc.), increasing the redemption requirement decreases the program's popularity.

Literature Review and Hypothesis Building

Existing Studies on Loyalty Program Management

The existing literature has extensively investigated how loyalty programs contribute to a firm's financial performance, but it has derived with mixed results. Some studies empirically found that loyalty programs could positively influence customers' purchase behaviors in various sectors (Taylor & Neslin, 2005). In addition, loyalty programs have been found to enable companies to learn more about their customers (Kumar & Shah, 2004) by offering rewards and other products that suit each customer's unique profile (O'Malley, 1998). By contrast, other studies show that loyalty programs may not be able to generate increased revenue or provide a better "fit" to address customers' needs (Dowling & Uncles, 1997). Even worse, in a competitive marketplace in which all firms are forced to offer loyalty programs, these programs may incur additional operating costs (due to program administration and the liabilities in the form of miles or points) without producing a competitive advantage (Dowling & Uncles, 1997). In a related study, Capizzi and Ferguson (2005) found that the relationship between loyalty programs and revenue becomes insignificant when consumers are unable to perceive the differences among different loyalty programs within the same industry.

In the airline and hotel industries, frequent flyer and frequent guest programs, respectively, have become common practice in an effort to maintain consumers' loyalty (Toh, DeKay, & Raven, 2008). In a survey of 287 hotel guests, Dekay, Toh, and Raven (2009) found that 81% of the travelers belonged to a frequent flyer program, while only 62% of them belonged to a hotel frequent guest program. To explain this finding, Dekay et al. (2009) argued that airline mileage awards tend to be more attractive than hotel award points because of their strong appeal, the ease of redemption, and the broad partnership network. The findings from Dekay et al. (2009) imply that a loyalty program's partnerships and redemption requirements will influence its popularity. However, Dekay et al. (2009) mainly focused on describing each individual customer's choice between the loyalty programs offered by two industries, and they did not provide an empirical measurement of a loyalty program's partnerships and requirement of redemption. Unlike Dekay et al. (2009), we explicitly incorporate all these factors into the hypothesis, measure them, and examine how they contribute to a loyalty program's popularity.

Loyalty Program Management in Emerging Market Economies

Although no standard definition of "emerging market" exists, three aspects of a country's economy are often used to determine whether it can be classified as an emerging market economy (Arnold & Quelch, 1998), including (a) the absolute level of economic development, normally measured by the average GDP per capita; (b) the economic growth rate, usually measured by the GDP growth rate; and (c) the system of market governance and structure and the degree of market freedom. In our study, an "emerging market economy" refers to an economy that satisfies one or more of these three criteria.

With respect to loyalty programs in emerging market economies, one recent comparative study of more than 2,000 Chinese and Dutch consumers in the banking and supermarket industries found that loyalty intentions are sensitive to consumers' cultural backgrounds (Zhang et al., 2014). In particular, Chinese consumers tend to demonstrate higher loyalty intentions than Dutch consumers (Zhang et al., 2014). However, in another study conducted in the tourism industry, Legohérel, Daucé, and Hsu (2012) compared travelers from Asia and those from Western countries and found no significant difference in terms of their attitudes toward variety seeking. These mixed findings imply that emerging market economies may potentially provide relevant justifications to generalize the results derived from developed market economies.

Hypotheses Building

A growing number of firms have loyalty programs through which they partner with firms in other industries that have overlapping or non-overlapping product or service offerings. Through these cooperative relationships, firms seek to exchange resources for mutual benefit via loyalty programs, such as greater product value, improved market reputation, and increased access to new markets and customers (Bucklin & Sengupta, 1993). From the perspective of loyalty program members, a broader network of partners enables them to obtain access to and benefit from the programs of all participating companies by accumulating "points" or "miles" from each partner firm. A broader network will also shorten the time required for tier advancement (Tanford, 2013). In addition, due to the increased opportunity to earn points or miles, consumers tend to get more involved in the loyalty program, which, in turn, increases its perceived value (McCall & Voorhees, 2010). In sum, we posit the following hypothesis regarding the relationship between the number of partners in a loyalty program and the program's overall popularity.

Hypothesis 1: A loyalty program's popularity is positively related to the number of partners.

Prior research has found that the reward a customer expects has a significant impact on the loyalty program's overall popularity (McCall & Voorhees, 2010). In particular, the expected reward from a loyalty program depends on several factors, including cash value, aspiration value, number of redemption options, and scheme's ease of use (O'Brien & Jones, 1995). In practice, frequent flyer and frequent guest programs often provide multiple options for redeeming awards. In addition to award tickets or rooms, customers may choose non-flight and non-hotel rewards, such as different types of merchandise, experiences, vouchers, and donations (Hofer, 2008). A broader scope for reward redemption increases the likelihood of a "fit" between the loyalty program and customers' needs (McCall & Voorhees, 2010), thus creating greater value for its members. Therefore, we propose the following hypothesis:

Hypothesis 2: A loyalty program's popularity is positively related to the number of redemption options.

On the negative side, too much effort or cost in redeeming awards reduces the consumer's net utility (O'Brien & Jones, 1995), thus decreasing a loyalty program's popularity. We define the "reward redemption requirement" as the minimum effort that customers must exert in the form of miles or points to redeem a particular reward. In the airline and hotel industries, consumers are generally required to accumulate a certain number of miles or hotel points to redeem an award. Consumers' chances of redeeming the reward are negatively related with the redemption requirement (Hofer, 2008). Numerous existing studies have found that the act of redemption is important in developing customers' positive feelings toward loyalty programs and cultivating loyalty (Smith & Sparks, 2009). Thus, we propose the following hypothesis regarding the relationship between the reward redemption requirement and the program's popularity.

Hypothesis 3: A loyalty program's popularity is negatively related to the award redemption requirement.

One important characteristic of loyalty programs is the preferential treatment that their most valuable clients enjoy (McCall & Voorhees, 2010). Most frequent flyer and guest programs currently grant different tiers of "elite status" to consumers, depending on the number of miles that a consumer flies or the number of nights that a consumer stays in a hotel over a calendar year or 12 consecutive months. Each tier requires different qualification thresholds and entitles qualified members to an increasing amount of preferential treatment and privileges.

From the perspective of customers, preferential treatment is perceived as elitism, which concerns a customer's inclination toward a certain ideological reality to claim exclusivity or superiority (Thurlow & Jaworski, 2006). For loyalty program members, tiers provide a sense of social status, as members compare themselves with those with other tiers (Drèze & Nunes, 2009). A higher threshold to obtain each tier reduces the number of members in each tier, thus increasing the scarcity and exclusivity (Tanford, 2013), which can translate into superior feelings and increased satisfaction. We thus hypothesize that increasing the tier threshold increases a program's popularity.

Hypothesis 4: A loyalty program's popularity is positively related to the difficulty of reaching elite tiers.

Data Collection and Measurement

Process of Data Collection

To examine the factors that contribute to a loyalty program's popularity, we manually collected secondary data from multiple sources. The data sources included official websites of the Freddie awards, several third-party platform websites (e.g., Tripadvisor.com, Expedia.com, and Ctrip.com), websites of all sample firms (airlines and hotels) in this study, and reports published by the International Air Transport Association (IATA), the International Civil Aviation Organization (ICAO), and the Air Transport Action Group (ATAG). Approximately 6,000 pages of hard copy documents and web pages were carefully studied to derive the required information; we consolidated this information into one data set.

All the firms included in this study are "major players" in emerging market economies, with at least a 10% share of the local market. Adopting the definition of emerging market from Arnold and Quelch (1998), this study considers the following countries as emerging market economies: Argentina, Brazil, Brunei, Chile, China, Colombia, Egypt, Estonia, India, Indonesia, Jordan, Kuwait, Malaysia, Mauritius, Mexico, Morocco, Nigeria, Oman, Pakistan, Philippines, Poland, Qatar, Romania, Russia, Saudi Arabia, Slovenia, South Africa, Sri Lanka, Thailand, Turkey, United Arab Emirates, Ukraine, and Vietnam. In total, 74 firms, including 53 airlines and 21 hotels, had complete data and were included in our study. Except for the information regarding the Freddie awards, the data collected were as of the end of 2013.

Description of Variables and Measures

Dependent variable. The dependent variable in this study is a loyalty program's popularity. One publicly available measurement of a loyalty program's popularity is the Freddie Award, which is generally acknowledged as "the most prestigious award" for frequent flyer and frequent guest programs around the world. Award winners are determined using a mixed approach that considers the number of votes that a program receives and the average score (between 1 and 10) that all the voters assign. Therefore, a Freddie Award can be used as a good approximation of a loyalty program's popularity from the perspective of customers.

Each year, Freddie awards are granted to high-achieving programs in three regions: (a) North America, (b) Europe and Africa, and (c) Middle East and Asia. Therefore, we measure a loyalty program's popularity by counting the number of Freddie awards that each sample loyalty program received from 2011 to 2015 (i.e., we consider a ±2-year window around 2013 to collect data regarding a program's popularity).[1] This approach is often used in the social sciences to soften the impact of short-term shocks and to achieve reliable results (Treiman, 2009).

Explanatory variables

Number of partners. We count the number of partners that a frequent flyer or frequent guest program has according to the information published on its website.

Number of redemption options. We count the number of options available for frequent flyer and frequent guest members to redeem their accumulated miles and points, respectively. These options typically include award flights, award night stays, flight or room upgrades, overweight payment exemption, car rentals, shopping, use of airport lounges, mile or point transfers among members, and donations.

Award redemption requirement. Developing a robust measurement of the award redemption requirements for both airline and hotel industries is crucial for the analysis in this study. In what follows, we will provide a detailed explanation of how we developed this measurement.

In the airline industry, depending on whether the award flight is a short or long haul, or economy class or business class, the minimum miles needed to redeem an award ticket vary considerably; therefore, we classified the minimum mileage redemption requirements into four cases: (a) economy class and short haul, (b) economy class and long haul, (c) business class and short haul, and (d) business class and long haul. The first two cases (economy class and short haul, and economy class and long haul) correspond to the redemption requirement for entry-level preferential treatment, whereas the other two cases (business class and short haul, and business class and long haul) measure the redemption requirement for top-level preferential treatment.

Because the ranges of short haul and long haul flights vary dramatically among different airlines, we unified the distance standard, namely, short haul flights (i.e., flights of approximately 500 miles or domestic flights in some cases) and long haul flights (i.e., flights of approximately 5,000 miles). We collected data regarding the number of miles (in units of 1,000 miles) needed to redeem a round-trip flight for the four case types considered. We then averaged the mileage required for long haul and short haul flights and determined the award redemption requirement for both economy class and business class tickets.

For hotels, redemption rates (i.e., the minimal "points" required to redeem a free night stay) are normally classified into different cases depending on the room's level of luxury. For each of the frequent guest programs, we collected data regarding the lowest and highest redemption rates available according to the programs' websites. However, the meaning of a "point" can vary dramatically across the hotel industry. To create a unified measurement, we did not directly use the redemption rates and instead converted the required points into the required monetary expenditure that customers had to spend to accumulate these points. This approach is feasible in the hotel industry because hotel points are usually

awarded according to the number of dollars that customers spend according to a certain ratio. We then measured each frequent guest program's award redemption requirement by calculating the amount of money (in units of US$100) required to redeem a free night stay for both standard rooms and luxury rooms such as suites.

In frequent flyer programs, the mile accrual ratio can vary from 200% or 300% of the actual miles flown by business class passengers to only 50% or 25% of the actual miles flown by economy class passengers. In this study, we calculated the average accrual ratio for each sample loyalty program and normalized the award redemption requirement by dividing it by the average accrual ratio.

The measurements that we created have different units of analysis for the airline and hotel industries: 1,000 miles for airlines and US$100 for hotels. To unify the unit of analysis across these two industries, we picked the highest redemption requirement in each industry (airline and hotel) and transformed each loyalty program's redemption requirement into a percentage of the highest redemption requirement in its industry.[2] In doing so, a similar unit of analysis with which to measure the redemption requirement could be applied to the airline and hotel industries.

In sum, the measurement of the award redemption requirement can be written as follows:

$$r_j^i = \frac{\dfrac{\dfrac{r^i_{\text{short},j} + r^i_{\text{long},j}}{2}}{\dfrac{\text{accrual ratio}^i_{\text{short},j} + \text{accrual ratio}^i_{\text{long},j}}{2}}}{r_j^*} \times 100 = \frac{\dfrac{r^i_{\text{short},j} + r^i_{\text{long},j}}{\text{accrual ratio}^i_{\text{short},j} + \text{accrual ratio}^i_{\text{long},j}}}{r_j^*} \times 100, \quad (1)$$

where $i \in \{1, 2, \ldots, 73, 74\}$, $j \in \{\text{airline, hotel}\}$, and r_j^* denotes the highest redemption requirement in industry *j*.

Entry-level and top-level tier thresholds. In practice, most frequent flyer and frequent guest programs have multiple tiers of elite status (Tanford, 2013). In this study, we focus on examining the thresholds for reaching the entry- and top-level tiers, which reflect the accessibility of elite status and the maximum effort needed to enjoy the full advantages of elite members, respectively. For frequent flyer programs, the threshold is normally based on the number of miles flown; therefore, we used the miles needed (in 1,000 mile units) in a year to reach the entry- and top-level tiers. In addition, for frequent guest programs, we used the number of nights needed in a year to reach these tiers. To unify the unit of analysis, we normalized the threshold values, dividing them by the highest threshold in their respective industries.

Control variables. First, we consider the potential "halo effect" that the firm's overall rating may have on the popularity of a firm's loyalty program. We collected airline ratings from Skytrax, a U.K.-based consulting firm that specializes in airline and airport reviews and ratings. Each year, it independently publishes updated ratings for commercial airlines all over the world. For hotels, we checked the ratings from several third-party platforms, including Expedia.com, Tripadvisor.com, and Ctrip.com, and calculated each hotel's average rating. Following the same procedure as that used to measure explanatory variables, we normalized the ratings for airlines and hotels in a range from 0 to 100. Second, we used a dummy variable to control each sample firm's industry of operation. In particular, a binary variable of 1 was assigned to an airline firm and 0 to a hotel. Third, we control the potential location effect by assigning a dummy variable of 1 to those whose headquarters are located in high-income countries and 0 otherwise. We adopt the World Bank's definition of a "high-income country" (i.e., a country with a gross national income per capita of more than US$12,735 in 2013). Exhibit 1 summarizes the descriptive statistics of all the variables that we used in this study.

Methodology and Results

Model Section

The dependent variable of this study, the number of Freddie Award received from 2011 to 2015, is a discrete count variable. A more detailed examination of the data shows that most of the sample firms did not receive a Freddie Award from 2011 to 2015. Exhibit 2 plots the distribution of the number of awards, and we can clearly see that it is dominated by zeros. In this case, zero-inflated Poisson (ZIP) and zero-inflated negative binomial (ZINB) models, which account for structural zeros, may be better options for empirical analysis than standard Poisson or negative binomial models (Tang, He, & Tu, 2012). In particular, the ZIP (ZINB) model is based on a two-component mixture that consists of a Poisson (negative binomial) and a degenerate distribution of the constant 0. In this study, we ran regressions with both ZIP (Model 1) and ZINB (Model 2) models. Our Model 1 (Model 2) consists of two components, the logistic model component for the Freddie Awards (=0):

$$\text{logit}\left(\Pr\left(\text{Award} = 0\right)\right) = \alpha_0 + \alpha_1 \text{Industry}, \quad (2)$$

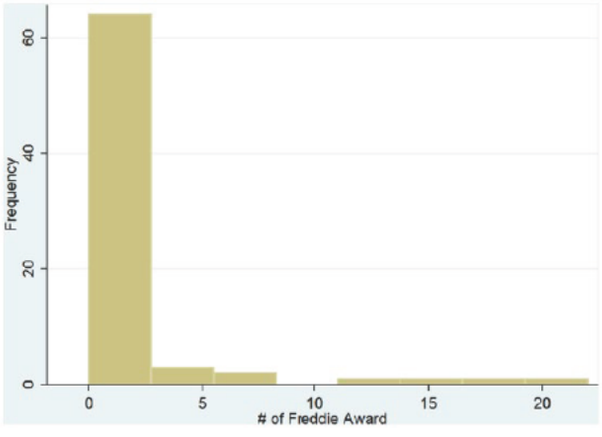
and the Poisson (negative binomial) model component:

Exhibit 1:
Descriptive Statistics of Variables.

Variables	*M*	*SD*
Number of Freddie awards	1.40	4.05
Number of partners	52.62	35.72
Number of redemption options	4.99	2.28
Redemption requirement of entry-level preferential treatment[a]	50.56	16.34
Redemption requirement of top-level preferential treatment[a]	36.96	18.81
Threshold of reaching entry-level tier[a]	67.95	24.01
Threshold of reaching top-level tier[a]	30.80	27.25
Overall rating	72.23	13.96

a. It is measured as a percentage of the highest in the industry.

Exhibit 2:
The Distribution of the Number of Freddie Awards.



$$\log\left(E\left(\text{Award}\right)\right) = \beta\_0 + \beta\_1 \text{Number of Partners} + \beta\_2 \text{Number of Redemption Options} + \beta\_3 \text{Redemption Requirement\_top} + \beta\_4 \text{Redemption Requirement\_entry} + \beta\_5 \text{Threshold\_top} + \beta\_6 \text{Threshold\_entry} + \beta\_7 \text{OverallRanking} + \beta\_8 \text{Location} + \varepsilon. \quad (3)$$

The error term ε is assumed to follow the Poisson (negative binomial) distribution in Model 1 (Model 2). The results of the Vuong test show that the ZIP (ZINB) model indeed fits significantly better with the data than a standard Poisson (negative binomial) model at $p = .034$ ($p < .01$).

In the following section, we will report the results and test our hypotheses with the ZIP and ZINB models.

Main Results

Exhibit 3 summarizes the main findings of this study. The results from both Model 1 (ZIP) and Model 2 (ZINB) show that the number of partners in a loyalty program has a significantly positive effect on the frequency with which firms receive Freddie awards (coefficient = 0.018 and $p = .011$). Therefore, Hypothesis 1 is supported. In addition, the number of Freddie awards received significantly increases with the number of redemption options in a loyalty program (coefficient = 0.18 and $p = .016$). Therefore, Hypothesis 2 is also supported.

The empirical models show mixed results regarding the relationship between a loyalty program's popularity and its award redemption requirements (Hypothesis 3). As we predicted, the loyalty program's popularity decreases as the requirement to redeem top-level preferential treatment increases (coefficient = −0.054 and $p < .01$). Surprisingly, the loyalty program's popularity increases as the requirement to redeem entry-level preferential treatment increases (coefficient = 0.068 and $p < .01$). Therefore, Hypothesis 3 is only supported for the redemption requirement for top-tier preferential treatment, not for the redemption requirement for entry-tier preferential treatment.

As for entry-level and top-level elite tier thresholds, our results show that both are positively correlated with the chance of winning a Freddie Award, with coefficient values of 0.036 ($p < .01$) and 0.043 ($p < .01$), respectively. These results imply that Hypotheses 4 is supported.

Conclusions and Implications

Summary of Findings

Collecting and consolidating secondary data from multiple sources, we empirically show that a loyalty program's

Exhibit 3:
Regression Results.

	Model 1 (ZIP)		Model 2 (ZINB)	
	Coefficient	*SE*	Coefficient	*SE*
Number of partners	0.018**	0.007	0.018**	0.007
Number of redemption option	0.181**	0.075	0.181**	0.075
Redemption requirement entry	0.068***	0.015	0.068***	0.015
Redemption requirement top	−0.054***	0.015	−0.054***	0.015
Threshold entry	0.036***	0.008	0.036***	0.008
Threshold top	0.044***	0.009	0.044***	0.009
Overall ranking	0.074***	0.022	0.074***	0.022
Headquarter location	−1.637***	0.586	−1.637***	0.586
Industry	1.514***	0.779	1.514***	0.779
Constant	11.951***	2.452	−11.951***	2.452
N	73.00		73.00	
Log likelihood	−57.49		−57.49	
χ^2	90.44		37.08	
p value	.000		.000	

Note. ZIP = zero-inflated Poisson; ZINB = zero-inflated negative binomial. *** *p*-value<0.01, **p-value<0.05.

popularity increases as the number of partners, the number of redemption options, and the thresholds for reaching the entry-level and top-level elite tiers increase. In addition, we find that the award redemption requirement has the opposite effect on a loyalty program's popularity—the program's popularity decreases as the requirement to redeem top-level preferential treatment increases. However, it increases as the requirement to redeem entry-level preferential treatment increases.

Discussions and Implications

The results of this study have wide-range implications for both research and practice. With respect to research, this study considers each loyalty program to be the unit of analysis and constitutes one of the few program-level studies in the loyalty program management literature. One unique finding in this study is that, in contrast to our hypothesis, a loyalty program's popularity increases with the requirement to redeem entry-level preferential treatment. This interesting yet counter-intuitive result must be carefully interpreted.

One plausible explanation of this result is related to the increased capacity available for redemption due to increased redemption requirement. From the perspective of revenue management, the allocation of a certain amount of capacity for award redemption, on one hand, helps utilize the potentially idle capacity and, on the other hand, carries the opportunity cost of losing sales from regular customers. The optimal amount of capacity allocated to redeemable seats/hotel rooms depends on the economical trade-off between the cost of allocating too much (in this case, firms may lose profits, which we refer to as overage cost) and the cost of allocating too little (in this case, firms do not fully utilize the capacity, which we refer to as underage cost). Increasing the redemption requirement has no impact on the underage cost but will reduce the overage cost, which is equal to the difference between the unit price of a regular seat/hotel room and the monetary value of the redemption requirement. Therefore, as the redemption requirement increases, over-allocation becomes less costly, and thus, firms would allocate more capacity to redeemable seats/hotel rooms. In the hospitality sector, the demand for entry-level preferential treatment, such as an economy class flight or standard hotel room, is relatively high. Providing a greater amount of redeemable capacity available will be perceived positively by the customers. In contrast, the demand for top-level preferential treatment is relatively low. In the airline industry, for example, the number of business class passengers is usually less than 20% of the number of economy class passengers. In this case, providing a greater amount of redeemable capacity available will not necessarily be appreciated by the customers. Instead, lowering the redemption requirement for top-level preferential treatment makes it more accessible, which in turn increases a loyalty program's popularity. Unfortunately, lacking publicly accessible data regarding firms' redeemable capacity, we are unable to examine firms' micro capacity allocation decision in detail. This also creates an agenda for future research as new data become available.

Another plausible explanation concerns the mechanism of signaling. The extant literature in marketing has shown that customers would perceive a higher price as a positive signal of product quality, both rationally (Milgrom &

Roberts, 1986) and psychologically (Mastrobuoni, Peracchi, & Tetenov, 2014). In the hospitality sector, the service quality of a top-level preferential treatment, such as a business class ticket, is quite standardized across different service providers (Capizzi & Ferguson, 2005). Consequently, the need to use price as a signal of quality is reduced. In contrast, the quality of an entry-level preferential treatment could differ significantly in terms of meals, legroom, and etc . As a result, most customers only obtain imperfect information regarding the award quality through their own experience. In this case, as redemption requirement can be translated into monetary expenditure, a higher redemption requirement implies a higher level of quality, which will in turn be perceived positively by the customers. In practice, one factor that may challenge the validity of this argument is the existence of "guru" or extremely experienced customers, who have almost perfect information regarding the quality of the awards. For these customers, an award offering with a higher price does not necessarily imply better service quality. In a related study, Li, Granados, and Netessine (2014) empirically estimated that in the airline industry, the percentage of strategic customers who are able to anticipate the price drop and delay purchase does not really account for a significant portion of the entire market—falling from 5.2% to 19.2%. As the customer's ability of foreseeing the price trend is strongly correlated with his or her past purchase experience, the existing finding seems to imply that the signaling mechanism continues to be effective for most customers in the market.

The third plausible explanation concerns the role of a loyalty program as a strategic instrument of market segmentation. Loyalty programs attract customers who are loyal and intrinsically connected to a brand, a product, or a service (Kumar & Shah, 2004). Loyal customers tend to have a higher willingness to pay for the similar product/service and share their perceptions with others via word-of-mouth than non-loyal customers (Taylor & Neslin, 2005). For entry-level preferential treatment, when the redemption requirement is low, both loyal and non-loyal customers will be attracted to redeem, which will lead to an asymmetric consequence (Wangenheim & Bayón, 2007)—the loyalty program will be perceived strongly negative by the loyal customers who do not get redeemable seats/hotel rooms and neutral or marginally positive by the non-loyal customers who get redeemable seats/hotel rooms. In this case, the loyal customers' negative perception could be quickly spread out via word-of-mouth; the loyalty program's overall popularity then decreases. As the redemption requirement increases, the awards offered by the loyalty programs become less attractive to non-loyal customers and the loyal customers have a higher chance of getting redeemable seats/hotel rooms. This helps create a positive perception by loyal customers, which in turn increases the loyalty program's overall popularity. For top-level preferential treatment, as their redemption requirement is already three to fourfold higher (e.g., business class tickets) than that of entry-level preferential treatment, non-loyal customers are automatically screened out. In this case, lowering the redemption requirement again makes the top-level preferential treatment more accessible and perceived more positively by the loyal customers.

For practitioners, this study provides clear guidance regarding the design of loyalty programs, and the findings of this study can be easily put into practice. In addition, our results show that a firm's overall ranking is positively related to the loyalty program's popularity. This finding provides strong evidence of the important role of the halo effect in the hospitality sector. As such, any improvement of a loyalty program's popularity should not be separated from a firm's overall marketing strategy and service offerings to consumers.

A country's macroeconomic environment (e.g., GDP per capita) is not necessarily a barrier that prevents firms from offering effective and well-received loyalty programs, which is another encouraging finding for practitioners. For example, Jet Airways and Turkish Airlines, whose headquarters are in India and Turkey, won five and two Freddie awards, respectively, over the past 5 years. The success of the loyalty programs in non-high income countries provides an excellent benchmark for practitioners in emerging market economies.

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Notes

1. Alternatively, we also use the "score" that the Freddie Awards winners and runner-ups receive to measure a loyalty program's popularity. We then apply an ordinary least square (OLS) model to test the robustness of our results. The results remain consistent and are available upon request.
2. Alternatively, we also normalize each loyalty program's redemption requirement by calculating its *z* score in its industry, that is, $= (x - \bar{x}) / \sigma$. All results remain robust under this measurement, and they are available upon request.

References

Arnold, D. J., & Quelch, J. A. (1998). New strategies in emerging markets. *MIT Sloan Management Review*. Retrieved from http://sloanreview.mit.edu/article/new-strategies-in-emerging-markets/

Atsmon, Y., Kuentz, J., & Seong, J. (2012). Building brands in emerging markets. *McKinsey Quarterly*, 9, 1-6.

Bucklin, L. P., & Sengupta, S. (1993). Organizing successful co-marketing alliances. *Journal of Marketing*, 57(2), 32-46. doi:10.2307/1252025

Capizzi, M. T., & Ferguson, R. (2005). Loyalty trends for the twenty-first century. *Journal of Consumer Marketing*, 22, 72-80. doi:10.1108/07363760510589235

Dekay, F., Toh, R. S., & Raven, P. (2009). Loyalty programs: Airlines outdo hotels. *Cornell Hospitality Quarterly*, 50, 371-382. doi:10.1177/1938965509338780

Dowling, G. R., & Uncles, M. (1997). Do customer loyalty programs really work? *Sloan Management Review*, 38, 71-82.

Drèze, X., & Nunes, J. C. (2009). Feeling superior: The impact of loyalty program structure on consumers' perceptions of status. *Journal of Consumer Research*, 35, 890-905. doi:10.1086/593946

Gandomi, A., & Zolfaghari, S. (2013). Profitability of loyalty reward programs: An analytical investigation. *Omega*, 41, 797-807. doi:10.1016/j.omega.2012.10.003

Hofer, D. (2008). *Reinforcing the value of frequent flyer miles: How a great reward experience drives mileage currency and FFP value*. White Paper presented at the FFP Expo, Dallas, TX August, 2008.

Kumar, V., & Shah, D. (2004). Building and sustaining profitable customer loyalty for the 21st century. *Journal of Retailing*, 80, 317-329. doi:10.1016/j.jretai.2004.10.007

Legohérel, P., Daucé, B., & Hsu, C. H. C. (2012). Divergence in variety seeking: An exploratory study among international travelers in Asia. *Journal of Global Marketing*, 25, 213-225. doi:10.1080/08911762.2012.748322

Li, J., Granados, N., & Netessine, S. (2014). Are consumers strategic? Structural estimation from the air-travel industry. *Management Science*, 60, 2114-2137.

Mastrobuoni, G., Peracchi, F., & Tetenov, A. (2014). Price as a signal of product quality: Some experimental evidence. *Journal of Wine Economics*, 9, 135-152.

McCall, M., & Voorhees, C. (2010). The drivers of loyalty program success: An organizing framework and research agenda. *Cornell Hospitality Quarterly*, 51, 35-52. doi:10.1177/1938965509355395

Milgrom, P., & Roberts, J. (1986). Price and advertising signals of product quality. *The Journal of Political Economy*, 94, 796-821.

O'Brien, L., & Jones, C. (1995, May-June). Do rewards really create loyalty? *Harvard Business Review*, pp. 75-82.

O'Malley, L. (1998). Can loyalty schemes really build loyalty? *Marketing Intelligence & Planning*, 16, 47-55. doi:10.1108/02634509810199535

Smith, A., & Sparks, L. (2009). Reward redemption behaviour in retail loyalty schemes. *British Journal of Management*, 20, 204-218. doi:10.1111/j.1467-8551.2008.00561.x

Tanford, S. (2013). The impact of tier level on attitudinal and behavioral loyalty of hotel reward program members. *International Journal of Hospitality Management*, 34, 285-294. doi:10.1016/j.ijhm.2013.04.006

Tang, W., He, H., & Tu, X. (2012). *Applied categorical and count data analysis*. Boca Raton, FL: CRC Press.

Taylor, G. A., & Neslin, S. A. (2005). The current and future sales impact of a retail frequency reward program. *Journal of Retailing*, 81, 293-305. doi:10.1016/j.jretai.2004.11.004

Thurlow, C., & Jaworski, A. (2006). The alchemy of the upwardly mobile: Symbolic capital and the stylization of elites in frequent-flyer programmes. *Discourse & Society*, 17, 99-135. doi:10.1177/0957926506058066

Toh, R. S., DeKay, F., & Raven, P. (2008). Characteristics of members of hotel frequent-guest programs: Implications for the hospitality industry. *Tourism Analysis*, 13, 271-280. doi:10.3727/108354208786094915

Treiman, D. (2009). *Quantitative data analysis: Doing social research to test ideas*. San Francisco, CA: John Wiley.

Wangenheim, F. V., & Bayón, T. (2007). Behavioral consequences of overbooking service capacity. *Journal of Marketing*, 71(4), 36-47.

Zhang, S., van Doorn, J., & Leeflang, P. S. H. (2014). Does the importance of value, brand and relationship equity for customer loyalty differ between eastern and western cultures? *International Business Review*, 23, 284-292. doi:10.1016/j.ibusrev.2013.05.002

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